

DETAILED ACTION

Election/Restrictions

1. Claims 3 and 4 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 23, 2009.

Claim Rejections - 35 USC § 112

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a graft copolymer comprising a rubbery polymer as the trunk polymer and vinyl-based monomers as the grafted units, does not reasonably provide enablement for the generically claimed modifier recited in claims 1 and 17. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. It is maintained that undue experimentation would be required to determine which “powder particle” materials are or are not operable within the scope of the presently claimed invention.

3. Claims 1 and 5-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the metes and bounds of the modifier are indeterminate in scope.

As presently recited, it is unclear as to whether or not the presence of non-irradiated powder particles having a particle size of 10 um or less is required given that "less than 30% by mass" includes zero as a lower limit.

In claim 1, it is unclear if or how irradiating the "less than 30% by mass" of "powder particles having a particle size of 10 um or less" can engender "more than 30% by mass" of the same particle type. That is, it is not understood how the "less than 30% by mass" becomes "more than 30% by mass".

In claim 1, since "non irradiated" has been deleted from the preamble, it is unclear as to whether or not the modifier comprises non-irradiated powder particles as well as irradiated powder particles.

In claim 1, are only the particles having sizes of 10 um or less, as opposed to those having sizes of 20 um or more, irradiated?

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 5-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious U.S. 5,017,631 (Rauch et al) as per reasons of record.

Response to Arguments

7. The arguments filed January 31, 2011 have been fully considered but they are not persuasive.

With respect to the 35 U.S.C. 112, first paragraph, issue, it is maintained that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. In this regard, it is noted that undue experimentation would be required to determine which "powder particle" materials are or are not operable within the scope of the presently claimed invention.

As to the 35 USC 112, second paragraph, issue, it is unclear as to whether or not the presence of non-irradiated powder particles having a particle size of 10 um or less is required given that "less than 30% by mass" includes zero as a lower limit. The fact that "comprise" is now recited does not remedy this confusion. In this regard it is noted that a claim comprising "less than 30% by mass" of a material still embraces the embodiment wherein said material is not present.

With respect to Rauch et al, patentees clearly disclose non-irradiated powder particles which meet the requirements of applicants' preferred graft copolymers both in

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terms of compositional makeup and latex particle size, per claim 16 (see column 4, lines 43-46, column 5, lines 3-7, Figures 1-5, etc.). The emulsion polymers are spray dried utilizing similar spraying conditions as described by applicants' specification (see present specification pages 17-18, examples, etc. and Rauch column 6, lines 38-55, etc.). The spray-dried particles predominately have particle sizes of 20 um or more as compared to the proportion of particles having a size of less than 10 um. Thus, the non-irradiated powder particles of the reference are similar, in both chemical make up and preparation process, to the non-irradiated emulsion polymers presently claimed.

Accordingly, given that the non-irradiated particles of the reference are the same as the non-irradiated particles presently claimed, there is a reasonable basis for believing that if the former particles are subjected to the same irradiation treatment as applicants', that is irradiation with an ultrasonic wave of 40W for 5 minutes, that the former would necessarily have the same capacity of generating "more than 30% by mass" of powder particles having a particle size of 10 um or less. That is, since the particles are the same, it would be reasonably expected that subjecting them to the same irradiation conditions would give rise to the same results set forth in applicants' claimed proviso. There is at present no objective evidence of record to show that the claimed non-irradiated powder particles are not the same as or obvious from the product of the prior art.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Ana L. Woodward/
Primary Examiner
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